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Proposal: Subjective Evaluation and Bias relating to Paraplegics

Chelsea Guyer

Georgia Institute of Technology

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The Americans with Disabilities Act, introduced in 1990, makes it unlawful to discriminate against disabled people in the work place. According to the United States Bureau of Labor Statistics, 22% of the workforce is considered disabled; this amounts to about 27 million people. ("Labor Force Statistics from the Current Population Survey," 2009) With such a substantial percentage of the workforce considered disabled it is important to understand what sort of biases these people may face. Most of today's workplaces are equipped to serve the physical needs of the disabled, but the law cannot alter people's stereotypes of or attitude towards them. These can affect both work evaluations and personnel selection. This issue is included in the ADA but it is nearly impossible to claim discrimination exists when a choice between two similar candidates depends on a subjective decision. In addition, the managers doing performance assessments may be unaware of an unconscious bias (Stone-Romero, et al., 2006). Nonetheless, if biases exist they may have a substantial effect on the life of the disabled person. In order to correct these biases it is important to understand their origins and their effects on personnel judgments.

A limited amount of research exists in the area of bias against the disabled, especially in comparison to research done in areas such as racial or gender bias. Also, the majority of current research fails to recognize the differences between specific types of disabled people, their various respective stereotypes and the affective responses these may engender. To increase knowledge of specific biases I will examine one particular disability: paraplegia. Paraplegia is defined as having an impairment in the motor and/or sensory function of the lower extremities.

Research results regarding disability bias are variable and, if examined as a whole, contradictory. Many researchers find that there is a "sympathy effect" in which participants evaluate and treat a disabled person more positively than a non-disabled person. The sympathy effect stems from the idea that participants feel pity for the disabled person and therefore rate them higher. Other researchers explain similar findings in terms of the "norm-to-be-kind". They believe that Western ideology requires one to be kind to those who are "less fortunate". (Bailey, 1991; Hastorf, Northcraft, & Picciotto, 1979; Katz, Glass, Lucido, & Farber, 1979; Scheier, 1978) For example, Stephens et. al (1985) demonstrated that participants were more likely to help a disabled individual search for a lost earring than they were a non disabled individual. In addition, participants helped the disabled confederate for a longer period of time than the control. (Stephens, Cooper, & Kinney, 1985) Thus, social desirability leads participants to rate people with disabilities more positively regardless of circumstances.

Sympathy effects are common in research that presents a social situation in which the participant must interact with a disabled person. They also measure only the participant's ratings of the confederate and no other behavior. Because people are assumed to have an innate desire to be viewed as good, whether or not this reflects their actual feelings they are almost always predicted to treat the disabled individual more positively. These studies are missing a key component of bias. Based on these findings alone one might conclude that people will consistently treat the disabled better than they will a normal person. However, other studies have shown that this is not true.

Some investigators have postulated that people have an innate dislike for the disabled. Their assumptions vary; a disabled person reminds the individual of their own

mortality and fragility (Meiser & Hewstone, 2004). Others propose resentment toward the disabled for their preferential treatment (Katz, et al., 1979), or a dislike based on the simple divergence from the norm (Novak & Lerner, 1968). A number of studies support these proposals as well. The studies that show a negative evaluation or treatment of the disabled tend to focus on variables such as "time spent talking to disabled" or "eye contact." (Comer & Piliavin, 1972; Elliott, MacNair, Herrick, & Yoder, 1991) They interpret findings of shorter interaction times with the disabled than with the non-disabled, for instance, as evidence for some underlying hostility towards or discomfort regarding the disabled (Comer & Piliavin, 1972). In a study by Katz et al. (1977), participants in one condition were ostensibly forced to administer a loud noise to punish either a disabled or non disabled confederate during an ESP task. The findings were consistent with studies of other stigmatized groups. Experienced guilt was highest in the disabled condition. The disabled person they "punished" was also rated significantly lower on a Likert scale than in the normal condition, facilitating the correction of cognitive dissonance and the justification of their higher levels of guilt. (Katz, Glass, Lucido, & Farber, 1977) Snyder et al. presented a situation to participants in which they could plausibly explain their choice to avoid a disabled person with non-prejudiced explanation. When people were given the alternative explanation the disabled person was repeatedly avoided (Snyder, Kleck, Strenta, & Mentzer, 2003) Elliot (1991) found that when disabled confederates conformed to negative stereotypes, such as being lethargic or depressed, they were consistently rated lower than the non disabled who exhibited the same behavior. (Elliott, et al., 1991) These results contradict the sympathy effect. Based

on these results alone one would conclude that people consistently treat the disabled poorly.

Clearly, no single study presents a full view of this complicated social issue. Katz takes a mixed approach to social cognition regarding the disabled typed. He theorizes that non disabled people hold ambivalent views towards the disabled and as in the "norm –to-be-kind," he cites western societal norms. He argues that the disabled are lacking some attributes that make someone "fully human", such as independence and ability to self sustain, which are particularly valued in western individualistic society. He believes that this creates resentment and negative affect towards the disabled. In addition, Katz theorizes that people feel bad for the disabled because they are victims of circumstance and, as in the norm to be kind, we are taught to treat them with sympathy. (Katz, et al., 1977) Katz's theory is consistent with Wegener and Petty's (1997) model of bias and bias correction. Their model focuses on bias in general and how people attempt to correct their unwanted bias when they become aware of it. These two conflicting ideals create ambivalence, and depending on methodology, experimental results can indicate either aspect of the ambivalence. Gibbons et al. (1980) demonstrates this duality. When a disabledperson's behavior was made highly relevant to the evaluator there was an amplified negative or positive rating depending on the level of direct interaction and the type of ratings collected. (Gibbons, Stephan, Stephenson, & Petty, 1980)

I believe by combining the negative and positive bias studies there is a way to provide a comprehensive look at bias against the disabled typed. Under general conditions of social interaction people will tend to treat the disabled better than they would a normal person in accordance with the sympathy effect and norm to be kind.

However there are many caveats to this. While the condition with the disabled person present may be more positive generally, if provided the option a person will avoid interaction with the disabled typed. In addition, when a disabled person confirms pre existing negative stereotypes, people will be predisposed to experience a more extreme negative evaluation of them regardless of the circumstances. Theoretically if forced to interact with the disabled typed, people will make an effort to correct their bias, overcorrecting to be especially kind. I believe that it comes down to affect and social desirability. Thus, I agree with Katz's concept of ambivalence, although not necessarily with his reasons for the ambivalence. The results of any given experiment come down to methodology, and its intersection with psychological processes.

As previously stated, racial bias has been heavily researched. While racial bias may result from different roots and have differing implications than "disabledbias", the research provides useful models to help understand bias in general. Brief et al. (2000) explored obedience to authority as a rationalization for employment discrimination. They found that when a participant was given a justifiable excuse by someone they perceived to be a legitimate authority figure they were more likely to discriminate based on race. (Brief, Dietz, Cohen, Pugh, & Vaslow, 2000) The results agree with research on disability bias (Snyder, et al., 2003). Katz et al., (1979) demonstrated a similar pattern of denigration of both paraplegics and African Americans by participants after they thought they had inflicted harm upon them. (Katz, et al., 1979) The two biases seem similar at a process level. Therefore, when attempting to understand bias against the disabled is important to acknowledge existing models. Particularly, Feldman's (1991) model of

social cognition and performance appraisal which parses bias into affect and stereotype components may be useful.

My study will focus solely on paraplegia. Prior studies have used a variety of disabilities to represent the idea of a generalized 'disabled person' e.g. a person in a wheel chair or a person without a leg. However, there are many different disabilities and each may elicit differential bias and have different implications for interactions with the disabled. Goodman et al. (1963) for instance, demonstrated a "handicap hierarchy". They determined that people not only have an evaluative preference towards specific disabilities over others but they also associate different disabilities with different personality characteristics. (Goodman, Dornbusch, Richardson, & Hastorf, 1963) It is important from a scientific as well as social perspective to note that my results will apply directly only to paraplegics, although the process may be more general.

My study will focus on bias in terms of avoidance and subjective ratings through the use of different dependent variables. I am combining Schwarz's summary of mood as information, which summarizes relevant literature that affect plays a role in social cognition. It is important to note that my study's methodology is specifically concerned with eliminating the social desirability effect. While I think understanding how social desirability interacts with affect and other elements of bias is important to study, for my purposes of understanding an implicit bias it must be eliminated. By focusing on implicit attitudes, social desirability should be eliminated. My general results should fall more in line with those of the "negative" results studies. My study will ask participants to rate photographs that they believe to have been taken by either a disabled a non-disabled photographer. The participant should use the mood induced by their feelings toward the

photographer to make subjective ratings of the photographs in condition which they are shown the photographer first. If the photographer is not disabled the ratings should not be affected. However, if the photographer is shown after the photographs the decision about the photographs should already have been made and the rating should also not be affected. I hypothesize that ratings associated with a paraplegic person will be lower than that of the control group when the image of the paraplegic is shown before the photographs.

Method

Participants

Participants in the experiment were 88 Georgia Institute of Technology students. The group was a mix of females and males. The age range was approximately 18-23.

Design

The study was a 2x2 between subjects design. The independent variables were presence of wheel chair and order of stimulus. The presence of wheelchair variable had two levels: wheel chair is present in the artist's photograph or wheelchair is not present. Order on stimulus also had two levels: artist's photograph before stimulus and artist's photograph after stimulus. The dependent variable was measured by the participant's ratings for each stimulus photograph in the five different domains: technical quality, photo composition, ability to capture attention, ability to induce thought and overall impact.

Materials

A computer was used to present the stimulus. The stimulus was eight photographs taken by a professional photographer. One independent variable was a photograph of the

photographer in which the only difference is a wheel chair or lack of wheelchair. The copy right to use the photos has already been obtained.

Procedure

Participants were asked to take part in an experiment that analyzed student's perceptions of art at a technical university. All participants signed informed consent sheets. The participants were given a web adress that contained the survey. The instructions told them that they are being asked to rate photographs on a scale of zero to ten in the five domains previously mentioned. Technical quality was described as the use of color, shape and form. Composition was described as degree to which the photograph combines the visual elements. Ability to capture attention was the fourth domain. Ability to induce thought was considered to be the amount of thought the photograph induced. The final domain was overall impact. The instructions also stated that the participant will not be able to go back and change their answers throughout the study. The participant then clicked the 'next' button. The computer randomly assigned the participant to one of four conditions. In condition one a photo of the photographer with a caption and false name appeared before the pictures was presented. In this photo the photographer was sitting in a chair. In condition two the photographer's photo was presented before the photographs and the photographer was sitting in a wheel chair. In condition three the participant was shown a photograph of the photographer after the stimulus had been presented and the photographer was not in a wheel chair. In condition four the participant was shown a photograph of the photographer after the stimulus and he was in a wheelchair. All participants were shown the eight photographs. The photograph appeared on the screen and the participant was given time to analyze it at their discretion and

when finished they clicked the 'next' button. After all eight pictures and the photograph of the photographer were presented, the participant was given the five domains and the respective five zero to ten scales with which they rated the photograph they previously saw. At the end of the study the participant was given a chance to sign up for results of the study and were notified that they are entitled to be fully debriefed as soon as all data is collected for the study.

Results

The data was compiled into an PASWStatistics spreadsheet and analyzed using a multivariate ANOVA to evaluate the effect of wheel chair presence and order of stimulus on ratings of the photographs. Wheel chair presence had two levels: no wheel char and wheel chair. Order of stimulus had two levels: the artist's picture presented before the photographs and the artist's picture presented after the photographs. The ratings on the photographs were measured using a zero to ten Likert scale for five domains: technical quality, photo composition, ability to capture attention, ability to induce thought and overall impact. Item number was included as a repeated measures dependent variable because the average ratings over the five domains was not used. The average was not used because correlation between items was not significantly high. Table 1 presents the correlations between items. The alpha level was 0.05. No significant effect was found for wheelchair presence, $f(2, 435) = .719$. No significant effect was found for order of stimulus, $f(2,435) = .987$. Furthermore, no significant effect was found for the interaction effect of wheelchair presence and order of stimulus, $f(2,435) = .412I$. Figure 1 presents the non-significant interaction of wheel chair presence and order of stimulus. The null hypothesis that presence of wheelchair will not have an effect on ratings cannot be

rejected. The null hypothesis that the order of the stimuli presented will not have an effect on the ratings can not be rejected. Finally, the null hypothesis that the interaction of wheelchair presence and order of stimuli presented will not have an effect on ratings cannot be rejected.

Discussion

The data did not support the original hypothesis that presence of wheelchair will have an effect on ratings. The data also did not support the hypothesis that the order the artist's photograph presented would have an effect on ratings. The data did not, additionally, support the final hypothesis that there would be a significant main effect on the ratings due to an interaction effect between the order of the artist's photograph presented and the presence of a wheelchair. The non-significant results show a trend towards the wheelchair after condition having the highest ratings and the no-wheelchair after condition displaying the lowest ratings. This is a trend that the original hypothesis did not predict.

The fact that the results were not significant has various implications. It is possible for subjective judgements related to art, a person being disabled has no effect on evaluations. This would mean that people are neutral towards the disabled. Given the concerns of discrimination, this would be the best results to have. Within the studied population, people would not be biased in their judgement on this particular atribute. While this would be ideal, there are still various ways in which the results may have been confounded.

It is possible that because the experiment was done at the participant's leisure that the participant did not look long enough at the picture to realize the person was disabled.

Another weakness of the study was that it was done with participants that are Georgia Tech students. Because they all attend Georgia Tech, they are more likely to have a high IQ and be in a technical field. It is possible that these results would not truly represent a generalized population. If a similar study was performed in the future it would be ideal to include a participant population taken from actual business people and managers. Another factor that should have been taken into account was the expression of the "artist" in the picture. In the wheelchair condition the artist displayed a smile while the non-wheelchair condition the artist was not smiling. This could have been a potential confound considering one of the possible stereotypes of the disabled is that they are generally unhappy.

Better control should be exerted in the future over the similarities in the photographs. Future studies may also wish to include a "no picture" condition. Any actual effect might be most discernable between any photograph and a lack of a photograph. A future similar experiment should also consider introducing variability in the photographers expression to eliminate that confound and see if any significant correlations occur. Despite the lack of significant results, the study of disabilities in the work place is still a significant issue that needs to be further addressed. It is clear from reviewing previous articles that the research done has essential contradictory ideas that need to be reconciled.

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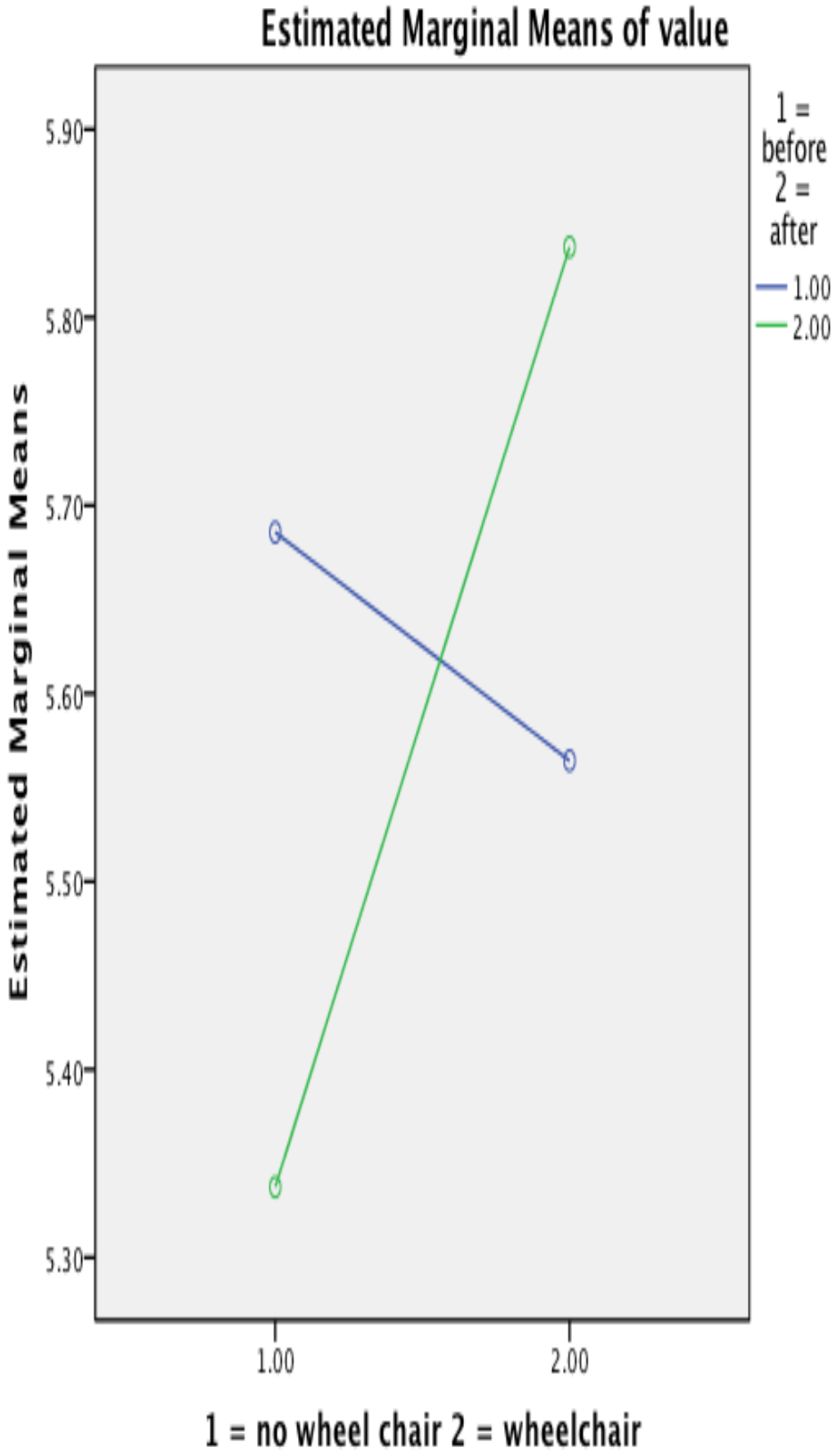
Table 1. *Correlations Between Items*

	Item 1	Item 2	Item 3	Item 4	Item 5
Item 1	1	0.600	0.688	0.568	0.616
Item 2	0.6	1.000	0.621	0.425	0.445
Item 3	0.688	0.621	1.000	0.653	0.615
Item 4	0.568	0.425	0.653	1.000	0.664
Item 5	0.616	0.445	0.615	0.664	1.000

Figure Caption

Figure 1. Interaction and main effects of wheel chair presence and order of stimulus.


Estimated Marginal Means of value
Estimated Marginal Means
5.90
5.80
5.70
5.60
5.50
5.40
5.30
1.00
2.00
1 = no wheel chair 2 = wheelchair
1 = before 2 = after
1.00
2.00